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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,255	04/13/2004	Gary J. Naarup	POP-101US	3494
31425 7590 01/24/2008 INDIANO VAUGHAN LLP ONE N. PENNSYLVANIA STREET SUITE 1300 INDIANAPOLIS, IN 46204			EXAMINER YOO, REGINA M	
			ART UNIT 1797	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/823,255

Applicant(s)

NAARUP, GARY J.

Examiner

Regina Yoo

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 4,32-39 and 59-70 is/are pending in the application.
- 4a) Of the above claim(s) 4 and 32-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 59-70 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

**Responsive to amendment of 11/21/2007 and Supplemental to the action mailed**

**12/27/2007**

This office action replaces the previously Final Action mailed on 12/27/2007.

***Election/Restrictions***

1. This application contains claims 4 and 32-39 drawn to an invention nonelected with traverse in the reply filed on 9/04/2007. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144)

See MPEP § 821.01.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 64-65 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, it appears that the second window possesses a tapered slot rather than the first window from the disclosure in Figure 5A and claim 66.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 59-60, 66 and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saeki (JP 09-169503) in view of Bulsink (6514467) and Friis-Hansen (3030924).

As to Claims 59-60, Saeki ('503) discloses an ozone-generating apparatus (see entire document, particularly Drawing 2), comprising:

a longitudinal axis;

an ozone-producing lamp (10) disposed along the longitudinal axis;

an adjustment member comprised of rollers (45, 46) and arm (49),

where the rotations of the adjustment member correspondingly changes the amount of light-shielding film (42) that covers the lamp (10) to effect adjustment of the

amount of ozone being produced by the ozone-producing lamp (10) (see entire document, particularly lines 1-3 of [0008] of English machine translation).

Saeki ('503) does not appear to specifically teach that the adjustment member of the ozone-generating apparatus is comprised of:

a first cylinder having a first cylinder sidewall, having a first window in the first cylinder sidewall, and being fixedly disposed about the longitudinal axis;

a second cylinder having a second cylinder sidewall, having a second window in the second cylinder sidewall, and being rotatably disposed about the longitudinal axis;

a shaft affixed at its proximal end to the second cylinder, the shaft extending in parallel with the longitudinal axis; nor

a knob affixed to a distal end of the shaft, where rotation of the knob effects rotation of the second cylinder and correspondingly changes an amount of overlap of the first and second windows.

It was well known in the art at the time of invention to provide an adjustment member that encloses an object and controls the amount of a material that is being produced/released from the object by rotation of said adjustment member in an air treatment device.

Bulsink ('467) exemplifies an adjustment member, comprised of:

a first cylinder (26) having a first cylinder sidewall, having a first window (28) in the first cylinder sidewall, and being fixedly disposed about the longitudinal axis;

a second cylinder (27) having a second cylinder sidewall, having a second window (28) in the second cylinder sidewall, and being rotatably disposed about the longitudinal axis within the first cylinder (see Figure 6);

wherein the cylinders completely enclose the object except that the overlap in windows directly expose a portion of the object through such overlap; and

a knob affixed at its proximal end to the second cylinder (27), where rotation of the knob effects rotation of the second cylinder and correspondingly changes an amount of overlap of the first and second windows (see entire document, particularly Col. 4 lines 6-18),

in order to adjust the amount of the opening in the adjustment member in the form of a movable covering cap so as to control amount of air that is being admitted into the interior and/or control the amount of the material produced and released from the object located within the covering cap to the exterior environment.

It would have been obvious to one of ordinary skill in this art at the time of invention to provide the configuration of the adjustment member exemplified by Bulsink in the apparatus of Saeki as an alternate configuration for the adjustment member in order to control the ozone being produced by the lamp by limiting the amount of the radiation that is released from the lamp to the exterior environment.

As to the limitation that the knob is affixed to a distal end of a shaft that is affixed to a body, it was well known in the art at the time of invention to provide a knob at the end of a shaft that is attached and extending from an apparatus.

Friis-Hansen ('924) exemplifies an apparatus wherein a knob (51) is affixed to a distal end of a shaft (50) that is extending from a body (see entire document, particularly Figures 2 and 6-7) in order to rotate the object (39) that is attached to the shaft (see Col. 3 lines 36-37).

It would have been obvious to one of ordinary skill in this art at the time of invention to provide a shaft between the second cylinder and the knob in the apparatus of Saeki as modified by Bulsink in order to rotate the object that is attached to the knob via the shaft as exemplified by Friis-Hansen.

Thus, Claims 59-60, 66 and 70 would have been obvious within the meaning of 35 U.S.C. 103(a) over the combined teachings of Saeki ('503), Bulsink ('467) and Friis-Hansen ('924).

7. Claims 67-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saeki (JP 09-169503) in view of Bulsink (6514467).

Saeki ('503) discloses an ozone-generating apparatus (see entire document, particularly Drawing 2), comprising:

a lamp (10) for emitting ozone-producing radiation; and

an adjustment member comprised of rollers (45, 46) and arm (49);

where the rotations of the rollers (45, 46) and arm (49) corresponds to changing the amount of light-shielding film (42) covers the lamp (10),

wherein the rotating is operative to adjust an amount of ozone being produced by the ozone-producing radiation (see entire document, particularly lines 1-3 of [0008] of English machine translation).

Saeki ('503) does not appear to specifically teach that the ozone-generating apparatus is comprised of:

first and second pipes respectively having first and second openings, the first and second pipes enclosing the lamp and being concentrically arranged with respect to one another; nor

an adjustable member that is connected to the first pipe for rotating the first opening with respect to the second opening,

wherein the rotating is operative to adjust an amount of ozone being produced by the ozone-producing radiation.

It was well known in the art at the time of invention to provide an adjustment member that encloses an object and controls the amount of a material that is being produced/released from the enclosed object by rotation of said adjustment member in an air treatment device. Bulsink ('467) exemplifies an adjustment member, comprised of:

first (27) and second (26) pipe having first and second openings (28), the first and second pipes enclosing the object (5) and being concentrically arranged with respect to one another (see Figure 6); and

an adjustment member in the form of a knob connected to the first pipe for rotating the first opening with respect to the second opening, wherein the rotating is



operative to adjust an amount of the material being released by the object (see entire document, particularly Col. 1 lines 35-39 and Col. 4 lines 6-18),

in order to adjust the amount of the opening in the adjustment member so as to control amount of air that is being admitted into the interior and/or amount of the material being released by the object within the adjustment member to the exterior environment.

It would have been obvious to one of ordinary skill in this art at the time of invention to provide an alternate configuration of the adjustment member in the apparatus of Saeki in order to limit the amount of the radiation that is released from the lamp to the exterior environment to control the ozone being produced by the lamp.

Thus, Claims 67-68 would have been obvious within the meaning of 35 U.S.C. 103(a) over the combined teachings of Saeki ('503) and Bulsink ('467).

8. Claims 61-63 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saeki (JP 09-169503) in view of Bulsink (6514467) and Friis-Hansen (3030924) as applied to claim 60 or over Saeki (JP 09-169503) in view of Bulsink (6514467) as applied to claim 67 above, and further in view of Nelson (20020098109) and Barnes (6893610).

Saeki ('503), Bulsink ('467) and Friis-Hansen ('924) are relied upon for disclosure described in the rejection of claim 60 under 35 U.S.C. 103(a).

Saeki ('503) and Bulsink ('467) are relied upon for disclosure described in the rejection of claim 67 under 35 U.S.C. 103(a).

While Saeki ('503) discloses that the ozone-generation apparatus is comprised of a base (12) (see Drawings 1-2; where the base is deemed capable of being installed into an HVAC duct), neither Saeki ('503), Bulsink ('467) nor Friis-Hansen ('924) appears to specifically each that the ozone-generation apparatus is further comprised of:

a first lamp holder structure for securing the ozone-producing lamp to the base;  
a germicidal lamp; nor  
a second lamp holder structure for securing the germicidal lamp to the base.

As to the limitation that first and second lamp holder structures are provided in an ozone-generation apparatus, it was well known in the art at the time of invention to provide holders for each lamp for securing the lamps to a base that is structured for being installed into an HVAC duct.

Nelson ('109) exemplifies an ozone-generation apparatus (see entire document, particularly Figures 12-19), comprised of:

lamps (36) with an ozone-producing section (12) and a germicidal section (14)  
(see Figures 1-3 and Figures 16-17);

lamp holder structures for securing the two lamps (36) to a base (12) (see Figures 12-19),

in order to secure the lamps to the apparatus for use in an HVAC duct (see p. 14 [0106]).

It would have been obvious to one of ordinary skill in this art at the time of invention to provide lamp holders in the apparatus of Saeki as modified by Bulsink in

order to secure the lamps to the base so that the lamps remain in desired position/location within the apparatus as exemplified by Nelson.

As to the limitation that there is a separate germicidal lamp, it was well known in the art at the time of invention to provide separate lamps where one is a ozone-producing lamp and the other being a germicidal lamp as an alternate configuration to that shown by Nelson as discussed above where the two functions are incorporated into one lamp.

Barnes ('610) exemplifies an apparatus for purifying air, comprised of:

a ozone-producing lamp (24, 25); and

a germicidal lamp (34, 36),

where separate lamps are provided in order to provide both ozone and UV for destroying contaminants and pathogens so as to purify air being treated by the apparatus.

It would have been obvious to one of ordinary skill in this art at the time of invention to provide separate ozone and UV lamps in the apparatus of Saeki as modified by Bulsink and Nelson as a known alternate configuration in order to produce both ozone and germicidal UV radiation in an air treatment apparatus as exemplified by Barnes.

Thus, Claim 61-63 and 69 would have been obvious within the meaning of 35 U.S.C. 103(a) over the combined teachings of Saeki ('503), Bulsink ('467), Friis-Hansen

('924), Nelson ('109) and Barnes ('610) or Saeki ('503), Bulsink ('467), Nelson ('109) and Barnes ('610).

9. Claims 64-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saeki (JP 09-169503) in view of Bulsink (6514467) and Friis-Hansen (3030924) as applied to claim 59 above, and further in view of Paradoski (5379922).

Saeki ('503), Bulsink ('467) and Friis-Hansen ('924) are relied upon for disclosure described in the rejection of claim 59 under 35 U.S.C. 103(a).

While Bulsink ('467) discloses that the first window is a rectangular slot (see Figure 6), neither Saeki ('503) nor Bulsink ('467) or Friis-Hansen ('924) appears to specifically teach that the first window is a tapered slot nor that the tapered slot has a non-linear taper.

It was well known in the art at the time of invention to provide any desired shape of opening in an adjustment member. Paradoski ('922) exemplifies that a window opening for an adjustment member is a tapered slot (58) (see Figure 5). It would have been obvious to one of ordinary skill in this art at the time of invention to provide a tapered slot and further to modify the tapered slot to have a non-linear taper as an alternate shape for the first window in the apparatus of Saeki as modified by Bulsink in order to provide an opening through which to release the material from the object within the adjustment member as exemplified by Paradoski.

Thus, Claims 64-65 would have been obvious within the meaning of 35 U.S.C. 103(a) over the combined teachings of Saeki ('503), Bulsink ('467), Friis-Hansen ('924) and Paradoski ('922).

### ***Response to Arguments***

10. Applicant's arguments with respect to claims 20 and 40-58 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Yoo whose telephone number is 571-272-6690. The examiner can normally be reached on Monday-Friday, 10:00 am - 7:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on 571-272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RY



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